

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Kent F. Hayes, Jr.

Docket No.: RSW920030232US1

Serial No.: 10/787,520

Examiner: Keehn, Richard G.

Filed: February 26, 2004

Art Unit: 2456

Confirmation No.: 6473

For: METHOD, SYSTEM AND PROGRAM PRODUCT FOR RESOLVING
PREREQUISITES FOR A CLIENT DEVICE IN AN OPEN SERVICE GATEWAY
INITIATIVE (OSGI) FRAMEWORK

September 23, 2011

Board of Patent Appeals and Interferences
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

REPLY BRIEF

A **REPLY BRIEF** is filed herewith. If any fees are required in association with this Reply Brief, the Director is hereby authorized to charge them to Deposit Account 09-0461, and consider this a petition therefor.

1. Introduction

This Reply Brief is in response to the Examiner's Answer dated July 26, 2011, (hereinafter "Examiner's Answer"). Some of the responses herein address arguments made by the Patent Office for the first time in the Examiner's Answer. Appellant incorporates by reference its Appeal Brief filed May 2, 2011, as if fully set forth herein, and provides responses to the allegations within the Examiner's Answer within the Argument section.

Appellant notes that the Patent Office has alleged certain disclosure with respect to specific references to form the present rejections. Appellant addresses certain of these specific allegations herein. However, it is understood that Appellant's arguments are directed to the combination of references as cited.

In several instances within the Examiner's Answer, the Patent Office has misquoted Appellant's claim language. This inaccurate use of Appellant's claim language indicates within the record that the Patent Office has misinterpreted Appellant's claim language and arguments. The Patent Office has additionally misinterpreted the references as cited.

For example, the Patent Office has cited disclosure of processing within the Clohessy reference of operations performed in response to a determination that prerequisites determined in step 100 would require more runtime resources than the client device has available. (Examiner's Answer, page 23). In contrast, Appellant has claimed a determination that a list of prerequisites that are not currently present on the client device would not require more resources than the current OSGi package and OSGi service interface resources of the client device.

As such, the Patent Office has arbitrarily inverted the logic of the determination claimed by Appellant and has failed to properly determine what Appellant has actually claimed. This results in multiple clear errors, including clear error by failing to properly determine the scope of Appellant's claims and clear error by failing to properly determine the differences between Appellant's claims and the references as cited. Additional errors are noted and discussed in detail below.

Additionally, Appellant has claimed, using the language of claim 1 for convenience:

automatically recursively resolving via the server device, in response to determining that the list of the prerequisites that are not currently present on the client device would not require more client device OSGi package and OSGi

service interface resources than the current OSGi package and OSGi service interface resources of the client device, the prerequisites by identifying a final set of OSGi bundles on the server device that fulfills the prerequisites within the resource limitations of the client device

(Emphasis added).

The Patent Office has cited disclosure within the Clohessy reference of removal of applications, when authorized by the user, to make more runtime resources available. (Clohessy, Figure 4, elements 104-112, as cited). This processing may iterate if authorized by the user through manual intervention. (Clohessy, Figure 4, element 110; and para. 0044).

The Patent Office's citation of iterative processing shows that the Patent Office has inaccurately interpreted Appellant's claim language and indicates that it does not understand the difference between the definition of the terms "recursion" and "iteration." These terms are different and are understood by persons of ordinary skill in the art to refer to different types of processing activities. Further, the cited disclosure of the Clohessy reference requires manual intervention, and is not automated as claimed by Appellant.

The disclosed runtime resources of the Clohessy reference are different from Appellant's claimed client device OSGi package and OSGi service interface resources. Additionally, the disclosed processing within the Clohessy reference to remove applications to make runtime resources available does not operate, even iteratively, "by identifying a final set of OSGi bundles on the server device that fulfills the prerequisites within the resource limitations of the client device," as claimed by Appellant.

In view of the distinctions discussed above and additional distinctions discussed below, the Clohessy reference as cited is not directed to the same problem Appellant has identified and solved. Accordingly, the Clohessy reference as cited is not analogous art for purposes of patent prosecution and the Clohessy reference should be withdrawn as a cited reference against patentability of Appellant's claims.

Regarding the Patent Office's response to Appellant's arguments regarding the rejection of claims 25 and 27-32 under 35 U.S.C § 101, the Patent Office alleges that the broadest reasonable interpretation of a claim drawn to a storage medium typically covers forms of non-tangible media and transitory propagating signals *per se*.

However, Appellant respectfully submits that this interpretation of Appellant's claim language in conjunction with the Patent Office's admission that Appellant's claimed subject matter is "embodied" as a "program product" and that Appellant's claimed subject matter is "stored" on a storage medium as part of that admitted program product is internally contradictory. As such, this interpretation would not be reasonable to one of ordinary skill in the art in view of the Patent Office's own admissions of Appellant's claimed subject matter being embodied as a program product stored on a storage medium. Appellant respectfully submits that claims 25 and 27-32 are directed to statutory subject matter.

Many additional clear errors of interpretation of both Appellant's claim language and the disclosure of the cited reference are discussed below.

In view of the multitude of errors, Appellant requests that the Board reverse the Examiner and instruct the Examiner to allow the claims for these reasons.

2. Argument

As discussed in detail within the Appeal Brief filed May 2, 2011 (hereinafter "Appeal Brief"), several gaps exist between the actual disclosure of the references as cited and Appellant's claimed subject matter. Appellant respectfully incorporates by reference the Appeal Brief in its entirety as if fully set forth herein and restates for the record the many elements that are missing from the references as cited. Appellant responds to certain specific allegations below. However, it is understood that the responses are directed to the combination of references as cited without any admission that the references may actually be combined as alleged.

In several instances within the Examiner's Answer, the Patent Office has misquoted Appellant's claim language. This inaccurate use of Appellant's claim language clearly indicates within the record that the Patent Office has misinterpreted Appellant's claim language and arguments. For example, the Patent Office mistakenly alleges that Appellant's claims require "determining a set of OSGi bundles, then automatically recursively resolving the set based on the prerequisites not currently on the client device." (Examiner's Answer dated July 26, 2011, page 21).

However, within this allegation, the Patent Office has failed to properly cite Appellant's claim language, and as such the allegation constitutes an arbitrary treatment of Appellant's claim language and shows that the Patent Office has disregarded Appellant's actual claim language to formulate the present rejections in clear error.

In contrast to the Patent Office's interpretation of Appellant's claim language, Appellant has actually claimed, with reference to claim 1, for example:

automatically recursively resolving via the server device, in response to determining that the list of the prerequisites that are not currently present on the client device would not require more client device OSGi package and OSGi service interface resources than the current OSGi package and OSGi service interface resources of the client device, the prerequisites by identifying a final set of OSGi bundles on the server device that fulfills the prerequisites within the resource limitations of the client device

(Emphasis added).

As such, Appellant has claimed automated recursive processing in response to determining that the list of the prerequisites that are not currently present on the client device would not require more client device OSGi package and OSGi service interface resources than the current OSGi package and OSGi service interface resources of the client device. Appellant has further claimed that the automated recursive resolution of prerequisites is performed by identifying a final set of OSGi bundles on the server device that fulfills the prerequisites within the resource limitations of the client device.

Accordingly, the allegation that Appellant claims "determining a set of OSGi bundles, then automatically recursively resolving the set based on the prerequisites not currently on the client device" is not only factually incorrect, this allegation omits several aspects of Appellant's claim language.

For example, the claimed language alleged by the Patent Office conveniently omits that Appellant actually claims recursively resolving via the server device, in response to determining that the list of the prerequisites that are not currently present on the client device would not require more client device OSGi package and OSGi service interface resources than the current OSGi package and OSGi service interface resources of the client device. The claimed language alleged by the Patent Office also conveniently omits that Appellant actually claims recursively

resolving via the server device the prerequisites by identifying a final set of OSGi bundles on the server device that fulfills the prerequisites within the resource limitations of the client device.

The claim language alleged by the Patent Office shows arbitrary disregard for Appellant's claim language by failing to consider that Appellant has claimed a determination that a list of prerequisites that are not currently present on the client device would not require more resources than the current OSGi package and OSGi service interface resources of the client device. The claim language alleged by the Patent Office also shows arbitrary disregard for Appellant's claim language by failing to consider that Appellant has claimed automated recursive resolution of the prerequisites by identifying a final set of OSGi bundles on the server device that fulfills the prerequisites within the resource limitations of the client device.

In contrast to Appellant's claim language, the Patent Office has cited disclosure of actually causing a user to authorize removal of applications if there are not enough currently available runtime resources. (Clohessy, Figure 4, elements 104-112, as cited). Currently available runtime resources are different from Appellant's claimed current OSGi package and OSGi service interface resources of the client device. Additionally, the cited disclosure of causing a user to authorize removal of applications if there are not enough currently available runtime resources is in direct opposition to Appellant's claimed recursive resolution of prerequisites by identifying a final set of OSGi bundles on the server device that fulfills the prerequisites within the resource limitations of the client device.

The Patent Office cites steps 104-112 of Figure 4 of the Clohessy reference that operate, as cited, in response to a determination that the prerequisites determined in step 100 would require more runtime resources than the client device has available. (Examiner's Answer, page 23). As cited, the Clohessy removes applications, when authorized by the user, in response to determining that the new application to be installed would require more runtime resources than the client device has available. (Clohessy, Figure 4, element 108 "Do Maximum Required Runtime Resources Exceed CARSRMAX?"). The additional processing of the cited steps 109 through 112 only operate when the required resources exceed the currently available resources. (Clohessy, Figure 4, "YES" branch). Otherwise, the application is just installed if there are enough runtime resources that are currently available. (Clohessy, Figure 4, element 114, "NO" branch).

This processing is completely opposite to the determination Appellant has claimed of the list of the prerequisites that are not currently present on the client device that would not require more client device OSGi package and OSGi service interface resources than the current OSGi package and OSGi service interface resources of the client device. The currently available runtime resources of the Clohessy reference are also different from Appellant's claimed client device OSGi package and OSGi service interface resources. As such, the Patent Office has arbitrarily inverted the logic of the determination claimed by Appellant and has failed to properly determine what Appellant has actually claimed.

Appellant reiterates that it has claimed processing in response to determining that the list of prerequisites that are "not currently present" would "not require more" client device OSGi package and OSGi service interface resources than the current OSGi package and OSGi service interface resources of the client device. In contrast to Appellant's claimed subject matter, the Patent Office has cited disclosure of a device performing processing to remove applications in response to a determination that is completely opposite to the determination that Appellant' has claimed, namely that installation of the application "will" require more runtime resources than are available (which are again different from Appellant's claimed client device OSGi package and OSGi service interface resources). Accordingly, the present rejections are in both clear and arbitrary error.

Additionally, with respect to the same claim phrase, Appellant has claimed, using the language of claim 1 again for convenience, "automatically recursively resolving via the server device . . . the prerequisites by identifying a final set of OSGi bundles on the server device that fulfills the prerequisites within the resource limitations of the client device." As such, Appellant's claimed recursively resolving the prerequisites by identifying a final set of OSGi bundles that fulfill the prerequisites within the resource limitations of the client device.

The cited disclosure of the Clohessy reference of causing a user to remove one or more applications within the Clohessy reference if there are not enough currently available runtime resources does not operate to recursively resolve prerequisites by identifying a final set of OSGi bundles that fulfill the prerequisites within the resource limitations of the client device. In contrast, this cited disclosure merely operates to remove applications to make runtime resources

available (which are again different from Appellant's claimed client device OSGi package and OSGi service interface resources).

Further, this allegation is irrelevant and is misdirected due to the Patent Office's inaccurate interpretation of Appellant's claim language and its failure to properly interpret Appellant's claim language, as discussed above. Appellant has reviewed the cited disclosure of the Clohessy reference to attempt to provide a comprehensive response with the hope that this will assist the Board in its consideration of the present Appeal.

Upon review of paragraphs [0035]-[0039] of the Clohessy reference, Appellant submits that the Clohessy reference makes clear that the prerequisites are "application components" for the application that are determined in block 100 of Figure 4 without consideration for what is installed on the client. (Clohessy, para. 0038). Appellant finds no actual disclosure of these prerequisite application components being OSGi bundles themselves. Further, Appellant finds no disclosure of a determination of a final set of OSGi bundles by automatically recursively resolving via the server device . . . the prerequisites by identifying a final set of OSGi bundles, as claimed by Appellant. The Clohessy reference does not disclose or suggest recognition of the problem Appellant has identified and solved.

In contrast, the cited disclosure of Figure 4 within blocks 104-112 is directed to removing applications to make runtime resources available. As cited in paragraph [0039], the runtime resources include a "RAM requirement, the thread requirement, and the socket requirement" As such, the runtime resources are different from Appellant's claimed client device OSGi package and OSGi service interface resources.

The iterative processing of Figure 4 additionally does not disclose recursive resolution of prerequisites themselves as claimed "by identifying a final set of OSGi bundles." In contrast, the cited disclosure of Figure 4 merely removes applications to make runtime resources available (which are again different from Appellant's claimed client device OSGi package and OSGi service interface resources).

Accordingly, the Patent Office has arbitrarily applied at least the Clohessy reference as one of the cited references against Appellant's claims, and the present rejections are in clear error.

Additionally, within the Examiner's Answer, the Patent Office's inaccurate interpretation of Appellant's claim language indicates that it does not understand the difference between the definition of the terms "recursion" and "iteration." These terms are different and are understood by persons of ordinary skill in the art to refer to different types of processing activities.

For example, a person of ordinary skill in the art would understand that recursion applies to situations where a function is applied to itself. For example, recursion applies to situations where an action is hierarchically performed, where in response to identification of dependencies or results of a function, the same function is applied within its own definition to each such dependency or result until all such dependencies or results are processed and/or resolved. In contrast, a person of ordinary skill in the art would understand that iteration applies to situations where a process repeats without application of a function to itself – without recursion.

As such, at a fundamental level, the two terms connote different processing, and a person of ordinary skill in the art would understand that Appellant's use of the phrase "recursively resolving prerequisites" is different from "iteratively" performing any processing. The Patent Office has cited and alleged anew that iterative processing of the available resources within the Clohessy reference discloses Appellant's claimed "recursively resolving prerequisites."

However, these new and renewed allegations are in clear error and show within the record that the Patent Office fundamentally misunderstands Appellant's claimed subject matter, and specifically misunderstands Appellant's claimed "recursively resolving prerequisites." This misunderstanding of Appellant's claimed subject matter clouds the record and prevents a proper determination of the scope of Appellant's claims and further prevents a proper determination of the differences between Appellant's claimed subject matter and the cited references.

All allegations with the Examiner's Answer appear to be based upon this fundamental misinterpretation of Appellant's claimed subject matter. As such, all allegations are believed moot in view of the clear error of interpretation of the language of Appellant's claims, and the clear error of determination regarding the differences between Appellant's claims and the cited references. Accordingly, the rejections of Appellant's claims, and the allegations within the Examiner's Answer, are in clear error for at least this additional reason.

The Patent Office further admits that it does not understand what Appellant has argued with respect to the McGuire reference. (Examiner's Answer dated July 26, 2011, page 22). The

Patent Office further alleges that the Clohessy reference “clearly discloses OSGi prerequisites.” *Id.*

However, as an initial observation, as discussed above, the Clohessy reference actually discloses that the prerequisites are “application components” for the application that are determined in block 100 of Figure 4. (Clohessy, para. 0038). Appellant finds no actual disclosure within the Clohessy reference of Appellant’s claimed OSGi prerequisites. As such, this allegation finds no support within the evidentiary record other than the allegation of the Patent Office.

Further, as discussed above, these “application components” are determined without consideration for what is installed on the client. (Clohessy, para. 0038). Appellant finds no actual disclosure of these prerequisite application components being OSGi bundles themselves. Further, Appellant finds no disclosure of a determination of a final set of OSGi bundles by automatically recursively resolving via the server device . . . the prerequisites by identifying a final set of OSGi bundles, as claimed by Appellant.

As such, the allegation that the Clohessy reference “clearly discloses OSGi prerequisites” is in clear error and fails to properly consider the factual disclosure of the Clohessy reference.

Regarding the Patent Office’s admitted misunderstanding of Appellant’s prior arguments regarding the McGuire reference, Appellant argued that the server of the McGuire reference does not perform Appellant’s claimed “substituting.” Appellant claims, using the language of claim 1 for convenience, “substituting via the server device, in response to determining that the list of the prerequisites that are not currently present on the client device would require more client device OSGi package and OSGi service interface resources than the current OSGi package and OSGi service interface resources of the client device, at least one other OSGi bundle that operates within the resource limitations of the client device for one of the OSGi bundles and one of the prerequisites of the list of the prerequisites that are not currently present on the client device.”

In contrast, the server of the McGuire reference is admitted by the Patent Office to do nothing more than respond to a list of files sent by the client device. For example, the Patent Office specifically admits within the record that “the server . . . [sends] the necessary files to the client based on a response from the client on resource deficiency.” (Final Office Action dated December 6, 2010, page 9, bracketed text added for readability). The Patent Office has further

admitted within the record that the “server, in response to the request, prepares update files corresponding to the requested files and downloads them to the client.” (Office Action dated June 30, 2010, page 3, Examiner emphasis omitted). As such, the Patent Office admits that the server of the McGuire reference does not determine a list of prerequisites as claimed by Appellant, and that the server operates to provide the files requested within the message received from the client device.

Accordingly, in contrast to Appellant’s claimed subject matter, the McGuire reference does not disclose a server that operates “in response to determining that the list of the prerequisites that are not currently present on the client device would require more client device OSGi package and OSGi service interface resources than the current OSGi package and OSGi service interface resources of the client device.” Further, the Patent Office has not identified Appellant’s claimed server that substitutes at least one other OSGi bundle that operates within the resource limitations of the client device for one of the OSGi bundles and one of the prerequisites of the list of the prerequisites that are not currently present on the client device in response to such a determination, as claimed by Appellant. For at least these additional reasons, the present rejection is in clear error.

The Patent Office further alleges that the cited disclosure of the McGuire reference “fits perfectly into Clohessy’s Figure 4, element 104” and constitutes a “perfect supplement to Clohessy, and does not render Clohessy inoperative.” (Examiner’s Answer dated July 26, 2011, page 23).

However, these allegations are in clear error. First, the allegation that the McGuire reference “fits perfectly into Clohessy’s Figure 4, element 104” and is a “perfect supplement” fails to consider that all elements of Appellant’s claims have not been identified within the evidentiary record of the present application, as discussed within the Appeal Brief and as discussed above. As such, the allegation that these aspects form a perfect supplement is irrelevant in view of the missing elements of Appellant’s claims, as detailed within the Appeal Brief and otherwise herein, because any such combination, if even possible, would not arrive at Appellant’s claimed subject matter.

Further, the cited disclosure of the McGuire reference is of a client device identifying files that are missing by execution of a setup program on the client device. In contrast, the cited

disclosure of the Clohessy reference within Figure 4 at block 104 is of determining currently available runtime resources. These processing functions are just different. If either operation were changed to operate as disclosed by the respective other reference, then both references would be fundamentally changed, which would render each reference unsatisfactory for their intended purposes.

Further, the allegation that modification of the Clohessy reference with the McGuire reference “does not render Clohessy inoperative” does not address what Appellant argued. Appellant argued that a fundamental principle of operation of the Clohessy reference would be changed.

Additionally, the Patent Office indicates that it does not understand Appellant’s arguments with respect to the fundamental change of principles of operation of the McGuire reference. (Examiner’s Answer dated July 26, 2011, page 23). The Patent Office admits that the sending of the setup program to the client “IS in McGuire” (*Id.*, emphasis in original).

Appellant reiterates that it was actually argued that if the client device of McGuire were modified to arrive at Appellant’s claimed substituting via the “server device” at least one other “OSGi bundle” that operates within the resource limitations of the client device, a fundamental principle of operation of the McGuire reference would be changed. The disclosed client of the McGuire reference is not a server and the disclosed client formulates the file download list. The server of the McGuire reference is disclosed to passively provide the files requested by the separate client processing and the server of the McGuire reference performs no determination or substitution as claimed by Appellant. As such, the allegations by the Patent Office show within the record that the Patent Office has erred by failing to properly consider Appellant’s previous arguments, and claim language.

The Patent Office alleges that Appellant argued a single reference “instead of the combination” with respect to Appellant’s arguments regarding the McGuire reference teaching away from Appellant’s claims by disclosing client-side processing for determination of the needed files instead of server-side processing as claimed by Appellant. (Examiner’s Answer dated July 26, 2011, page 23).

However, this allegation fails to consider that a teaching away argument necessarily references the disclosure of the reference that actually teaches away from Appellant’s claimed

subject matter. Further, Appellant actually argued that the “Patent Office’s interpretation of the Clohessy reference in combination with the McGuire reference is at least clearly erroneous and is not reasonable to someone skilled in the art.” (Appeal Brief filed May 2, 2011, page 19). As such, this allegation constitutes an arbitrary interpretation of Appellant’s prior arguments. For the record, Appellant respectfully submits that the cited references may not actually be combined to arrive at Appellant’s claimed subject matter for the reasons discussed above and within the Appeal Brief.

For purposes of the present Reply Brief and the Appeal Brief, Appellant reiterates that the Patent Office has alleged certain disclosure with respect to specific references to form the present rejections. Appellant addresses certain of these specific allegations herein. However, it is understood that Appellant’s arguments are directed to the combination of references as cited.

The Patent Office further alleges that “Clohessy clearly discloses the server’s automatic resolution of prerequisites in Figure 4, elements 104-112.” (Examiner’s Answer dated July 26, 2011, page 23).

However, this allegation is in clear error. As discussed above, elements 104-112 of the Clohessy reference are directed to determinations of currently available runtime resources and removal of applications if more resources would be required than are available for the application to be installed. (Clohessy, Figure 4, elements 104-112, as cited). Appellant notes that this processing is not related to Appellant’s claimed automatically recursively resolving via the server device, in response to determining that the list of the prerequisites that are not currently present on the client device would not require more client device OSGi package and OSGi service interface resources than the current OSGi package and OSGi service interface resources of the client device. Further, this processing is not related to Appellant’s claimed automatically recursively resolving via the server the prerequisites by identifying a final set of OSGi bundles on the server device that fulfills the prerequisites within the resource limitations of the client device.

As such, the Clohessy reference as cited is not directed to the same problem Appellant has identified and solved. Accordingly, the Clohessy reference as cited is not analogous art for purposes of patent prosecution and the Clohessy reference should be withdrawn as a cited reference against patentability of Appellant’s claims.

The Patent Office further admits that the Clohessy reference operates on the server side and alleges that Appellant argued against client side processing, and that this resulted in an “apples-to-oranges comparison.” (Examiner’s Answer dated July 26, 2011, page 24).

However, though Appellant recognizes that the Patent Office did not understand Appellant’s prior arguments, Appellant argued and reiterates for the record that the McGuire reference teaches away from Appellant’s claims by disclosing client-side processing for determination of the needed files instead of server-side processing as claimed by Appellant. Further, these “files” are different from Appellant’s claimed at least one other OSGi bundle that operates within the resource limitations of the client device for one of the OSGi bundles and one of the prerequisites of the list of the prerequisites that are not currently present on the client device.

As such, citation of client-side processing within the McGuire reference does not fill the gaps of the server-side processing discussed within the Appeal Brief and otherwise herein with respect to the Clohessy reference. Accordingly, the Patent Office’s allegations of the alleged “apples-to-oranges comparison” fails to properly consider Appellant’s actual arguments and obscures the record before the Board. Appellant does not believe that further response is needed for allegations regarding arguments that Appellant did not make.

The Patent Office further alleges that “Clohessy then automatically and recursively resolves the prerequisites the client actually needs by comparing what the list requires vs. what the client has available to it.” (Examiner’s Answer dated July 26, 2011, page 26).

However, this allegation shows within the record that the Patent Office has misinterpreted Appellant’s claim language. As discussed above, Appellant has claimed automatically recursively resolving via the server device, in response to determining that the list of the prerequisites that are not currently present on the client device would not require more client device OSGi package and OSGi service interface resources than the current OSGi package and OSGi service interface resources of the client device, the prerequisites by identifying a final set of OSGi bundles on the server device that fulfills the prerequisites within the resource limitations of the client device.

In contrast, the Clohessy reference as cited discloses iterative processing to remove applications to create more currently available runtime resources so that the application may be

installed in response to determining that the application would require more resources than are available. Again, the currently available runtime resources are different from Appellant's claimed client device OSGi package and OSGi service interface resources.

As such, this cited disclosure is not analogous to Appellant's claimed automatically recursively resolving via the server device, in response to determining that the list of the prerequisites that are not currently present on the client device would not require more client device OSGi package and OSGi service interface resources than the current OSGi package and OSGi service interface resources of the client device. Further, this processing is not related to Appellant's claimed automatically recursively resolving via the server the prerequisites by identifying a final set of OSGi bundles on the server device that fulfills the prerequisites within the resource limitations of the client device.

In view of these distinctions, the Clohessy reference as cited is not directed to the same problem Appellant has identified and solved. Accordingly, the Clohessy reference as cited is not analogous art for purposes of patent prosecution and the Clohessy reference should be withdrawn as a cited reference against patentability of Appellant's claims.

The Patent Office further alleges that "[b]oth Appellant's claimed invention and the Clohessy reference create an initial set of prerequisites, and both revise based on what the client needs at the moment." (Examiner's Answer dated July 26, 2011, page 26).

However, as discussed above, the Patent Office admits that "the prerequisites needed to be sent to the client will not change" (Examiner's Answer dated July 26, 2011, page 21, emphasis added). Accordingly, the Patent Office has contradicted itself.

This allegation additionally shows within the record that the Patent Office has misinterpreted Appellant's claim language and has misinterpreted the cited disclosure of the Clohessy reference. The Clohessy reference discloses that it removes applications to make more currently available runtime resources (CARSRMAX). (Clohessy, Figure 4, element 104). Currently available resources, such as RAM, number of threads, etc. are very different from Appellant's claimed "current OSGi package and OSGi service interface resources of the client device." Accordingly, the present allegations are internally contradictory and in clear error.

The Patent Office further alleges that "memory is one of the prerequisites needed to run a client application and recursive removal of applications to free up memory is certainly within the

definition of recursively resolving prerequisites.” (Examiner’s Answer dated July 26, 2011, page 27).

However, this allegation shows within the record that the Patent Office has failed to properly consider Appellant’s claim language. Appellant has claimed automatically recursively resolving via the server device, in response to determining that the list of the prerequisites that are not currently present on the client device would not require more client device OSGi package and OSGi service interface resources than the current OSGi package and OSGi service interface resources of the client device, the prerequisites by identifying a final set of OSGi bundles on the server device that fulfills the prerequisites within the resource limitations of the client device.

In contrast, the Clohessy reference as admitted by the Patent Office is directed to freeing up memory, which is disclosed to be performed by removing applications. This allegation further shows that the Patent Office does not understand the definition of “recursion.” Appellant incorporates by reference the discussion above regarding the definition of recursion and notes that the present allegations are in clear error for at least failing to properly understand the definition of recursion.

Further, removal of applications to free up memory is not equivalent or analogous to Appellant’s claimed automatically recursively resolving via the server device the prerequisites by identifying a final set of OSGi bundles on the server device that fulfills the prerequisites within the resource limitations of the client device.

As such, the Clohessy reference as cited is admitted by the Patent Office to be directed to a different problem from the problem Appellant has identified and solved. Accordingly, the Clohessy reference as cited is not analogous art for purposes of patent prosecution and the Clohessy reference should be withdrawn as a cited reference against patentability of Appellant’s claims.

The Patent Office further alleges that Appellant’s arguments regarding the definition of recursive resolution are unpersuasive because the fact that bundles may themselves have prerequisites means that they may also not have prerequisites. (Examiner’s Answer dated July 26, 2011, page 28).

However, this allegation fails to recognize that Appellant’s claimed recursively resolving claims a form of processing that manages situations where prerequisites themselves have

prerequisites. As such, the presence or absence of a prerequisite for any prerequisite is independent of Appellant's claimed recursively resolving the prerequisites by identifying a final set of OSGi bundles. As such, the allegations of the Patent Office again show within the record that the Patent Office does not understand the definition of the term recursion.

The Patent Office further alleges that this "whole argued notion of 'recursion' meaning the resolution of perquisites that require more prerequisites is not claimed or supported within the disclosure." (Examiner's Answer dated July 26, 2011, page 28).

However, Appellant has not argued a requirement for prerequisites having more prerequisites. In contrast, Appellant has claimed automated recursive resolution of prerequisites, which identifies a particular form of processing where prerequisites of prerequisites are effectively resolved. Further, recursive resolution as claimed is very clearly supported within Appellant's specification.

As cited within the Appeal Brief, Appellant defines that recursive resolution is directed to situations where prerequisites themselves have prerequisites and repeatedly resolving these prerequisites of prerequisites recursively until all prerequisites are resolved or until no other combinations of bundles remain that can provide all needed packages and services that are missing on client device within the resource limitations of client device. (Specification, para. 0023, page 10, lines 15-18). Appellant teaches that "[r]ecursive resolution is especially useful since any quantity or hierarchy of prerequisites might need resolution (e.g., other OSGi bundles 20 could themselves have prerequisites)." (Specification, para. 0023, page 10, lines 19-20).

As such, Appellant's specification very clearly identifies situations where recursive resolution of prerequisites involves any quantity or hierarchy of prerequisites that may be resolved. Accordingly, the allegations of the Patent Office that Appellant's claimed subject matter is not supported within Appellant's Specification is in clear error.

Additionally, this set of allegations by the Patent Office shows again within the record that the Patent Office does not understand the definition of recursion. Appellant incorporates by reference the discussion above regarding the definition of recursion, which is fully supported within Appellant's Specification and is clearly claimed.

The Patent Office further alleges that Appellant has changed the interpretation of Figure 4 of the Clohessy reference. (Examiner's Answer dated July 26, 2011, page 28). Within this

allegation, the Patent Office alleges that the Clohessy reference recursively resolves prerequisites. *Id.*

However, this allegation once again fails to consider that Appellant claims recursively resolving prerequisites “by identifying a final set of OSGi bundles on the server device that fulfills the prerequisites within the resource limitations of the client device.” This claimed subject matter is very different from the disclosed removal of applications until enough currently available runtime resources are available to allow installation of the application. Appellant finds no actual disclosure within the Clohessy reference of any recursive processing of prerequisites to identify a final set of OSGi bundles that fulfills the prerequisites within the resource limitations of the client device. Accordingly, these allegations are also in clear error and show that the Patent Office has failed to properly interpret Appellant’s claimed subject matter, has failed to properly interpret the disclosure of the Clohessy reference, and has failed to properly determine the differences between Appellant’s claimed subject matter and the cited reference.

The Patent Office alleges that Appellant’s claims do not preclude client-side “manual or semi-automatic intervention.” (Examiner’s Answer dated July 26, 2011, page 29). However, Appellant respectfully submits that this allegation is believed to be irrelevant.

Appellant has claimed “automatically recursively resolving, via the server . . . the prerequisites by identifying a final set of OSGi bundles on the server” This claimed subject matter is clearly claimed to be server device processing. As such, the allegations of client-side manual or semi-automated intervention are not believed to be particularly relevant and show once again within the record that the Patent Office has failed to properly interpret Appellant’s claimed subject matter.

The Patent Office alleges that Appellant has proposed a change to the cited disclosure of Figure 4 of the Clohessy reference. (Examiner’s Answer dated July 26, 2011, page 30). The Patent Office further alleges that “changing the runtime resource calculation is nothing more than resolving the resources needed on the client based on what the client apparently has or has not.” (*Id.*, at pages 30-31).

However, this allegation again shows within the record that the Patent Office fails to properly consider Appellant’s claim language. Appellant claims recursively resolving the prerequisites “by identifying a final set of OSGi bundles on the server that fulfills the

prerequisites within the resource limitations of the client device” The cited disclosure, as alleged by the Patent Office to include changing a runtime resource calculation, does not operate to identify any final set of OSGi bundles as claimed by Appellant.

In contrast, the disclosed processing of Figure 4 beginning with element 104 is directed to removing other applications to make runtime resources available for the new application to be installed. Appellant finds no disclosure of recursively resolving prerequisites by identifying a final set of OSGi bundles.

As such, the present allegations show once again within the record that the Patent Office has misinterpreted the actual disclosure of the cited references. The additional allegations within this section of the Examiner’s Answer on page 31 represent additional examples of failure to properly interpret Appellant’s claimed subject matter, failure to properly interpret the cited references, and failure to properly determine the difference between Appellant’s claimed subject matter and the references as cited.

Because the problem addressed by Appellant has not been recognized within the cited combination of references, Appellant respectfully submits that no reason has been identified to incur additional time or expense to perform the alleged modifications of the cited references to arrive at Appellant’s claimed subject matter. Additionally, even if a similar problem could be identified, a proposition to which Appellant does not concede, a person of skill may have chosen a different modification of elements than the solution chosen by Appellant and would further need to find the elements that have been identified as missing from the references as cited. Accordingly, Appellant respectfully submits that Appellant’s claimed subject matter was not obvious to a person of ordinary skill in the art at the time of filing based upon the references as cited.

The Patent Office repeats certain allegations throughout additional portions of the Examiner’s Answer. However, Appellant finds no suggestions that the Patent Office has properly considered Appellant’s claim language, the references as cited, or the differences between Appellant’s claimed subject matter and the references as cited. As such, Appellant respectfully submits that these additional allegations are also in clear error. Appellant incorporates by reference the discussion above with respect to each other allegation and respectfully submits that it should be applied against each additional allegation. As such,

Appellant respectfully submits that each allegation that is not specifically addressed is equally in clear error based upon the discussion above. The additional allegations within the Examiner's Answer are in clear error for at least the reasons discussed above and Appellant does not concede to these allegations.

Regarding the Patent Office's response to Appellant's arguments regarding the rejection of claims 25 and 27-32 under 35 U.S.C § 101, the Patent Office admits that "Appellant has provided evidence that applicant intends the invention to be embodied as a program product stored on a storage medium." (Examiner's Answer dated July 26, 2011, page 37, emphasis added). The Patent Office then alleges that the broadest reasonable interpretation of a claim drawn to a storage medium typically covers forms of non-tangible media and transitory propagating signals *per se. Id.* The Patent Office further alleges that "the claims are drawn to a form of energy." *Id.*

However, Appellant respectfully submits that this interpretation of Appellant's claim language in conjunction with the Patent Office's admission that Appellant's claimed subject matter is "embodied" as a "program product" and that Appellant's claimed subject matter is "stored" on a storage medium as part of that admitted program product is internally contradictory.

As such, this interpretation would not be reasonable to one of ordinary skill in the art in view of the Patent Office's own admissions of Appellant's claimed subject matter being embodied as a program product stored on a storage medium. Appellant respectfully submits that if something is embodied as a program product stored on a storage medium, it is certainly not propagating.

In contrast to the *In re Nuijten* case, Appellant has not claimed "transitory electrical and electromagnetic signals propagating through some medium." (*In re Nuijten*, 500 F.3d 1346, 1352 (Fed. Cir. 2007)). As admitted by the Patent Office, Appellant has claimed subject matter to be embodied as a program product stored on a storage medium. A program product is statutory subject matter. In fact, the Board affirmed that the "storage medium" claim 15 of the Nuijten application was statutory. (*Id.* at 1351).

Storage mediums, as claimed by Appellant and as allowed within the Nuijten application, are different from the general and broader phrase “computer readable medium” of concern within the “Interim Examination Instructions for Evaluating Subject Matter Eligibility Under 35 U.S.C. § 101,” dated August 24, 2009. A storage medium may not be reasonably interpreted as broadly as a general computer readable medium and may not be reasonably interpreted as a carrier wave. The term “storage” is by definition non-transitory and excludes signals *per se*.

Appellant’s claims 25 and 27-32 are Beauregard claims, a long-standing form of claim. Further, Appellant teaches that a storage medium may include media such as “magnetic media, optical media, random access memory (RAM), read-only memory (ROM), a data cache, etc.” (Specification, para. 0029). A program product is a statutory class of subject matter under 35 U.S.C. § 101 and Appellant has claimed this program product stored on a storage medium.

Appellant’s claim 25 further recites that the program product stored on a storage medium is “executed by a computer for resolving prerequisites” Appellant respectfully submits that Appellant’s claimed computer program product must be stored, such as within one of the example storage mediums, in order to be executed by the computer. As such, the allegations by the Patent Office to the contrary constitute clear error and arbitrary interpretation of Appellant’s claimed subject matter in a manner that is inconsistent with Appellant’s specification, and in a manner that would not be reasonable to a person of ordinary skill in the art.

Further, regarding the allegations that information is stored “on” a propagating signal, and that as such a propagating signal equates to Appellant’s claimed “storage medium,” this allegation is technically incorrect, is inconsistent with the teachings of Appellant’s Specification, and is inconsistent with commonly accepted use of the term “storage medium.” As discussed above, Appellant teaches that a storage medium may include media such as “magnetic media, optical media, random access memory (RAM), read-only memory (ROM), a data cache, etc.” (Specification, para. 0029). In contrast to the allegation of the Patent Office, a propagating signal is not stored within the medium through which it propagates and a propagating signal does not lay at rest within a RAM, within a ROM, or within any other storage medium consistent with the teachings of Appellant’s Specification. In contrast, a propagating signal is exactly that, a continually transitioning form that never rests – is never stored – and is only passed from molecule to molecule. A battery may store energy, for example, but the energy stored within a

battery is potential energy, and is not a propagating signal. There is a fundamental difference between a storage medium, as claimed, and a propagating signal as alleged. Accordingly, for these additional reasons, the rejection of Appellant's claims 25 and 27-32 as non-statutory is unreasonable.

Appellant does not believe that the suggestion by the Patent Office to add "non-transitory" to these claims adequately protects Appellant's interests because of the possibility for misinterpretation of the phrase "non-transitory" to exclude statutory categories of program products. This potential exclusion and the suggestion by the Patent Office is believed inconsistent with the internal Patent Office guidelines with respect to amendments to include the phrase "non-transitory," which are intended to address signals *per se*. Appellant has claimed a program product, not a signal *per se*. As such, these suggested amendments are believed misdirected by the Patent Office toward Appellant's current claims, and unreasonable in nature.

Appellant respectfully requests the Board to reverse the Examiner and instruct the Examiner to allow claims 25 and 27-32 under 35 U.S.C § 101 for these reasons. If the Board does not agree that these claims are allowable over the 35 U.S.C § 101 rejection, Appellant respectfully requests the Board to exercise its authority under MPEP § 41.50(c) and to include an explicit statement of how claims 25 and 27-32 may be amended to overcome this specific rejection other than by inclusion of the "non-transitory" language.

For the many reasons discussed within the Appeal Brief filed May 2, 2011, and discussed above, Appellant requests that the Board reverse the Examiner and instruct the Examiner to allow the claims for these reasons.

3. Conclusion

This Reply Brief is in response to the Examiner's Answer dated July 26, 2011, (hereinafter "Examiner's Answer"). Some of the responses herein address arguments made by the Patent Office for the first time in the Examiner's Answer. Appellant incorporates by reference its Appeal Brief filed May 2, 2011, as if fully set forth herein, and provides responses to the allegations within the Examiner's Answer within the Argument section.

Appellant reiterates that the Patent Office has alleged certain disclosure with respect to specific references to form the present rejections. Appellant addresses certain of these specific

allegations herein. However, it is understood that Appellant's arguments are directed to the combination of references as cited.

In several instances within the Examiner's Answer, the Patent Office has misquoted Appellant's claim language. This inaccurate use of Appellant's claim language indicates within the record that the Patent Office has misinterpreted Appellant's claim language and arguments. The Patent Office has additionally misinterpreted the references as cited.

For example, the Patent Office has cited disclosure of processing within the Clohessy reference of operations performed in response to a determination that prerequisites determined in step 100 would require more runtime resources than the client device has available. (Examiner's Answer, page 23). In contrast, Appellant has claimed a determination that a list of prerequisites that are not currently present on the client device would not require more resources than the current OSGi package and OSGi service interface resources of the client device.

As such, the Patent Office has arbitrarily inverted the logic of the determination claimed by Appellant and has failed to properly determine what Appellant has actually claimed. This results in multiple clear errors, including clear error by failing to properly determine the scope of Appellant's claims and clear error by failing to properly determine the differences between Appellant's claims and the references as cited. Additional errors are noted and discussed in detail above.

Additionally, Appellant has claimed, using the language of claim 1 for convenience:
automatically recursively resolving via the server device, in response to determining that the list of the prerequisites that are not currently present on the client device would not require more client device OSGi package and OSGi service interface resources than the current OSGi package and OSGi service interface resources of the client device, the prerequisites by identifying a final set of OSGi bundles on the server device that fulfills the prerequisites within the resource limitations of the client device
(Emphasis added).

The Patent Office has cited disclosure within the Clohessy reference of removal of applications, when authorized by the user, to make more runtime resources available. (Clohessy, Figure 4, elements 104-112, as cited). This processing may iterate if authorized by the user through manual intervention. (Clohessy, Figure 4, element 110; and para. 0044).

The Patent Office's citation of iterative processing shows that the Patent Office has inaccurately interpreted Appellant's claim language and indicates that it does not understand the difference between the definition of the terms "recursion" and "iteration." These terms are different and are understood by persons of ordinary skill in the art to refer to different types of processing activities. Further, the cited disclosure of the Clohessy reference requires manual intervention, and is not automated as claimed by Appellant.

The disclosed runtime resources of the Clohessy reference are different from Appellant's claimed client device OSGi package and OSGi service interface resources. Additionally, the disclosed processing within the Clohessy reference to remove applications to make runtime resources available does not operate, even iteratively, "by identifying a final set of OSGi bundles on the server device that fulfills the prerequisites within the resource limitations of the client device," as claimed by Appellant.

In view of the distinctions discussed above, the Clohessy reference as cited is not directed to the same problem Appellant has identified and solved. Accordingly, the Clohessy reference as cited is not analogous art for purposes of patent prosecution and the Clohessy reference should be withdrawn as a cited reference against patentability of Appellant's claims.

Regarding the Patent Office's response to Appellant's arguments regarding the rejection of claims 25 and 27-32 under 35 U.S.C § 101, the Patent Office alleges that the broadest reasonable interpretation of a claim drawn to a storage medium typically covers forms of non-tangible media and transitory propagating signals *per se*.

However, Appellant respectfully submits that this interpretation of Appellant's claim language in conjunction with the Patent Office's admission that Appellant's claimed subject matter is "embodied" as a "program product" and that Appellant's claimed subject matter is "stored" on a storage medium as part of that admitted program product is internally contradictory. As such, this interpretation would not be reasonable to one of ordinary skill in the art in view of the Patent Office's own admissions of Appellant's claimed subject matter being embodied as a program product stored on a storage medium. Appellant respectfully submits that claims 25 and 27-32 are directed to statutory subject matter.

Many additional clear errors of interpretation of both Appellant's claim language and the disclosure of the cited reference are discussed above.

In view of the multitude of errors, Appellant requests that the Board reverse the Examiner and instruct the Examiner to allow the claims for these reasons.

Respectfully submitted,
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Date: September 23, 2011